Instructions for Lab Report

The lab report (PDF file) should contain the following sections:

1. Cover Page

- Course Name: CSC 3210 Computer Organization and Programming
- Lab 3: "for" loops with incrementing/decrementing index
- Your Name/session
- Date
- Professor's Name

2. Introduction (Brief overview)

- Purpose of the lab
- Main objectives
- Brief explanation of for loops in assembly

3. Methodology/Procedure

- Document each program created:
    - Original incrementing loop (loop.c)
    - Decrementing loop (loop_decrement.c)
    - Numbers 1-20 program (lab3_1to20.c)
    - Even numbers program (lab3_1to20even.c)
    - Odd numbers program (lab3_1to20odd.c)
- Include source code and outputs for each
- Include relevant assembly code snippets
- Explain key differences between incrementing and decrementing loops in assembly

4. Analysis of Results Answer the questions from Step-15 of the lab:

- Q1: What changes were made to print numbers 1-20? How difficult was it?
- Q2: For integer division by 2, is the result also an integer? Why/why not?
- Q3: Compare difficulty of implementing odd vs even numbers

5. Key Assembly Code Observations

- Explain the differences found using the diff command
- Discuss important assembly instructions (movl, addl, subl, cmpl)
- Explain jump instructions (jle, jg) and their purposes

6. Conclusion

- Summary of what you learned
- Challenges faced
- Understanding gained about for loops in assembly

7. Screenshots/Appendix (if needed)

- Terminal outputs
- Key program results
- Important assembly code sections